

**FIG. 1**

GATCTATGCAGAAAACTTACTACTATTTTGAATCACTTCTCCAAAGGCCAGAAAAATCAGCCTGTTAGCTGCAGTTGC  
TATGAATGTGAACACAGAAAGAAAAGAGACTACATTTGGGGTTTCTTATTTAGGGCAGGTGGGGCAAACTACAAA  
TGACTTTAGCTGACTAGCTGAATAGTTTACTACCCAATCATGAAATAATCTTTATATATTTTCCCTTTTAGGAC  
CCTTCAATCACTGTTGTTCCAATCAGTGAGTAAGTTTTTCTTAACAAGTCGAATCCTGAGCTGAGGATC

FIG. 2A

5'	AGCCG	CGC	11	CAG	GGT	GGC	20	CGG	GGA	GGG	29	GTG	AGC	AGG	38	GTG	CCG	CTG	47	GCT	GGG	56	GTC
	P	A	Q	G	G	R	G	G	V	S	R	V	P	L	A	A	G	V					
	TGC	AGG	65	TCA	CCG	AGT	CCC	CAG	GAG	83	AGG	GGA	CTC	CTA	AGA	AGC	101	CAC	CTG	CCT	GTG		
	C	R	S	P	S	P	Q	E	R	G	L	L	R	S	H	L	P	V					
	TTT	ACC	119	CGG	CAG	CGA	GCG	CGC	AGG	137	CCC	CCG	CGA	ACT	CCT	GGC	155	AGC	GCT	CAG	GAA		
	F	T	R	Q	R	A	R	R	P	P	R	T	P	G	S	A	Q	E					
	AGG	CCG	173	TTG	CGC	CTC	GCG	AAG	GAA	191	ACA	GAG	CCG	TTG	ACC	ATG	GTT	GCA	ACT	GGC			
	R	P	L	R	L	A	K	E	T	E	P	L	T	M	V	A	T	G					
	AGT	TTG	227	AGC	AGC	AAG	AAC	CCG	GCC	245	AGC	ATT	TCA	GAA	TTG	CTG	263	GAC	TGT	GGC	TAT		
	S	L	S	S	K	N	P	A	S	I	S	E	L	L	D	C	G	Y					
	CAC	CCA	281	GAG	AGC	CTG	CTA	AGT	GAT	299	TTT	GAC	TAC	TGG	GAT	TAT	GTT	GTT	CCT	GAA			
	H	P	E	S	L	L	S	D	F	D	Y	W	D	Y	V	V	P	E					
	CCC	AAC	335	CTC	AAC	GAG	GTA	ATA	TTT	353	GAG	GAA	TCA	ACT	TGC	CAG	371	AAT	TTG	GTT	AAA		
	P	N	L	N	E	V	I	F	E	E	S	T	C	Q	N	L	V	K					
	ATG	CTG	389	GAG	AAC	TGT	CTG	TCC	AAA	407	TCA	AAG	CAA	ACT	AAA	CTT	GGT	TGC	TCA	AAG			
	M	L	E	N	C	L	S	K	S	K	Q	T	K	L	G	C	S	K					
	GTC	CTT	443	GTC	CCT	GAG	452	AAA	CTG	ACG	461	CAG	AGA	ATT	GCT	CAA	GAT	479	GTC	CGG	CTT		
	V	L	V	P	E	K	L	T	Q	R	I	A	Q	D	V	L	R	L					
	TCC	TCA	497	ACG	GAG	CCC	506	TGC	GGC	TTG	515	CGA	GGT	TGT	GTT	ATG	CAC	533	GTG	AAC	TTG	GAA	
	S	S	T	E	P	C	G	L	R	G	C	V	M	H	V	N	L	E					
	ATT	GAA	551	AAT	GTA	TGT	560	AAA	AAG	CTG	569	GAT	AGG	ATT	578	GTG	TGT	GAT	587	TCT	AGC	GTC	GTA
	I	E	N	V	C	K	K	L	D	R	I	V	C	D	S	S	V	V					
	CCT	ACT	605	TTT	GAG	CTT	614	ACA	CTT	GTG	623	TTT	AAG	CAG	GAG	AAC	TGC	641	TCA	TGG	ACT	AGC	
	P	T	F	E	L	T	L	V	F	K	Q	E	N	C	S	W	T	S					

FIG. 2B

659	668	677	686	695	704
TTC AGG GAC TTT TTC	TTT AGT AGA GGT CGC	TTC TCC TCT GGT	TTC AGG AGA ACT		
F R D F F F	S R G R F S S G F				
					R R T
713	722	731	740	749	758
CTG ATC CTC AGC TCA	GGA TTT CGA CTT GTT	AAG AAA AAA CTT	TAC TCA CTG ATT		
L I L S S G F R L V K K K L				Y S L I	
767	776	785	794	803	812
GGA ACA ACA GTG ATT	GAA GGG TCC TAA AAA	GGG AAA ATA TAT	AAA GAT TAT TTC		
G T T V I E G S *					
821	830	839	848	857	866
ATG ATT GGG TAG TAA AAC	TAT TCA GCT AGT CAG	CTA AAG TCA TTT	GTA GTT TGC		
875	884	893	902	911	920
CCC ACC TGC CCT AAA TAA	GAA ACC CCA AAT GTA	GTC TCT TTT CTT	TCT GTG TTT		
929	938	947	956	965	974
CAC ATT CAT AGC AAC TGC	AGC TAA CAG GGT TTT	CTG GCC TTT GGA	GAA GTG		
983	992	1001	1010	1019	1028
ATT CAA AAT AGT GTA GAT	TTT CTG CAT AGA TCC	CAT TTT TGT ACA	GAA TTG AAT		
1037	1046	1055	1064	1073	1082
GGG ATG GAA TAG GTA AGC	AAA AGT AGA AGC CCA	TTT GAG TTT TAC	ATT TGA TTC		
1091	1100	1109	1118	1127	1136
CAC AAT TTG GTT TCA GGT	AGG CTT GGT GAT AGA	CTA TAT AAA CCA	GAT TTG CCT		
1145	1154	1163	1172	1181	1190
ATT TTG ATT TTC ATA TGG	CTT TTT TTT CTG	TAA GTT TTC	AGA GAA TTT	TTT AAA	
1199	1208	1217	1226	1235	1244
TCA CAG AAT CAT ACT AAA	TGA TAT TTA GCC	TAT CAA AAC	TTC CAA AAG	CCC ACA	
1253	1262	1271	1280	1289	1298
CCA CCA GTT CCT GAC	TCA AAT TTG AAG	GGT TTT TAG	ACA GGA GGG	TAG GAT TAA	
1307	1316	1325	1334	1343	1352
GTA GGT GAG TTT AAT TAA	AGC TTA ACC CTA	GGT AAG AGT AAA	TGA GAA ATA	TTA	
1361	1370	1379	1388	1397	1406
CGG CAA TAA TGG AAC	TGC TTC ACT GTT TCT	TGG TGA CTT	CCT CAC TCT	AAT GTT	
1415	1424	1433	1442	1451	1460
TTA AAG AGG CAA CAA AAG	CIT ATG GTG CCA	TTT CAG TAA	CCA CGG TGT	TGT TTT	
1469	1478	1487	1496	1505	1514
AGA TGC CTT TAT AAG	CTC AGT TTC CCT	TGT TCT TAA	GTG TTG AAT	ACT GTC TTT	
1523	1532	1541	1550	1559	1568
AAA CTA GAA AAA TGC	AAA ATA TTG AAC	TGA TAT TTC	TGT GTG TAG	TTT ATT ACT	
1577	1586	1595	1604	1613	1622
CTT CCA TTG AGT GAA	TGA TGA ATA CCT	GTG AGG ATA	GGA AAT GAG	TTT TGA GAT	
1631	1640	1649	1658	1667	1676
CTA GTC CCT CTC TGA	TTC ACT TAG TAA	TCT ATC CTC	TTT TCA GTA	TTA CAT GTG	
1685	1694	1703	1712	1721	1730

[illegible][illegible]

**FIG. 3**

MVATGSLSSKNPASISELLDCGYHPESLLSDFDYWDYVVPEPNLNEVIFEESTC  
QNLVKMLENCLSKSKQTKLGCSKVLVPEKLTQRIAQDVLRLSSSTEPCGLRGC  
VMHVNLEIENVCKKLDRIVCSSVPTFELTLVFKQENC SWT SFRDFFF SRGR  
FSSGFRRTLILSSGFRLVKKKLYSLIGTTVIEGS

# Fig. 4A

Query: 6 SLSSKNPASISELLDCGYHPESLLSDFDYWDYV-VPEPNLNEVIFEESTCQNLVKMLENC 64  
 SL S + S+ + G+ PE D Y D V +P+ L +E C NL+++L+  
 Sbjct: 45 SLESSDCESLDSS-NSGFGPEE---DSSYL DGVSLPDFELLSDPEDHLCANLMQLLQES 100

Query: 65 LS KSKQT KLGCSKVLVPEKLTQRIADVLRLSSTEP CGLRGCMVHNLEIENVCCKLDRI 124  
 LS+++ +++L+P +L ++ +++LRL+ +EPCGLRG ++ V +E C + ++  
 Sbjct: 101 LSQARLGSRRLPARLLMPSQLLSQVGKELLRLAYSEPCGLRGALLDVCVEGQKSCHSVAQL 160

Query: 125 VCDSSVVPTEFELTLVFKQENCSTXXXXXXXXXXXX-XXXXTLILSSGFRLVKKKLYS 183  
 D S+VPTF+LTLV + ++ W +L LS+GFR++KKKLYS  
 Sbjct: 161 ALDPSLVPTPQLTLVLRDLSRLWPKI QGLSSANS SLVPGYSQSLTLSTGFRVIKKKLYS 220

# FIG. 4B

Query: 6 SLSSKNPASISELLDCGYHPESLLSDFDYWDYV-VPEPNLNEVIFEESTCQNLVKMLENC 64  
 SL S + S+ + G+ PE D Y D V +P+ L +E C NL+++L+  
 Sbjct: 48 SLESSDCESLDSS-NSGFGPEE---DTAYLDGVSLPDFELLSDPEDHLCANLMQLLQES 103

Query: 65 LS KSKQT KLGCSKVLVPEKLTQRIADVLRLSSTEP CGLRGCMVHNLEIENVCCKLDRI 124  
 L++++ +++L+P +L ++ +++LRL+ +EPCGLRG ++ V +E C + ++  
 Sbjct: 104 LAQARLGSRRLPARLLMPSQLVSQVGKELLRLAYSEPCGLRGALLDVCVEGQKSCHSVGQL 163

Query: 125 VCDSSVVPTEFELTLVFKQENCSTXXXXXXXXXXXX-XXXXXXTLILSSGFRLVKKKLYS 183  
 D S+VPTF+LTLV + ++ W +L LS+GFR++KKKLYS  
 Sbjct: 164 ALDPSLVPTPQLTLVLRDLSRLWPKI QGLFSSANS PFLPGFSQSLTLSTGFRVIKKKLYS 223

FIG. 5A

Query: 1 MVATGSLSSKNPASISELLDCGYHPESLLSDFDYWDYVVPPEPNLNEVIFEESTCQNLVKM 60  
 Sbjct: 1 MVATGSLSSKNPASISELLD GYHP SLLSDFDYWDYVVPPEPNLNEV+FEETCQNLVKM  
 Query: 61 LENCLSKSKQTKLGCSKVLVPEKLTQRIAQDVLRSLSTPCGLRGCMVHMVNLEIENVCKK 120  
 LENCLS+SKQTKLGCSKVLVPEKLTQRIAQDVLRSLSTPCGLRGCMVHMVNLEIENVCKK  
 Sbjct: 61 LENCLSRSKQTKLGCSKVLVPEKLTQRIAQDVLRSLSTPCGLRGCMVHMVNLEIENVCKK 120  
 Query: 121 LDRIVCDSSVVPTFELTLVFKQENCSWTSKDKDFFFSRGRFSSGLKRTLILSSGFRLVKKK 180  
 LDRIVCD+SVVPTFELTLVFKQ+E C WTSKDKDFFFSRGRFSSGLKRTLILSSG+RLVKKK  
 Sbjct: 121 LDRIVCDASVVPTFELTLVFKQESCPWTSKDKDFFFSRGRFSSGLKRTLILSSGRLVKKK 180  
 Query: 181 LYSLIGHTTVIE 191  
 LYSLIGHTTVIE  
 Sbjct: 181 LYSLIGHTTVIE 191

FIG. 5B

Query: 43 NLNEVIFEESTCQNLVKMLENCLSKSKQTKLGCSKVLVPEKLTQRIAQDVLRSLSTPCG 102  
 NL++V S + L + L+ L +K+ L C++V +P LTORIA +++R+S EPCG  
 Sbjct: 162 NLDDV--SASAVRELSQQLQAQLRDAKRRHLACTEVLPLNDLTQRIAAEIRMSEREPCG 219  
 Query: 103 LRGCMVHMVNLEIE-NVCKKLDRIVCDSSVVPTFELTLVFKQENCSWTSKDKDFFFSRGRFSSGLKRTLILSSGFRLVKKK 161  
 R C + + E E N K++ D V FEL L +Q+ W+  
 Sbjct: 220 ERACTLFIEFESEPNKVKRIAYFKVDPDPTVSI FELYLTLRQDKSGWS---SLVPQFIKN 275  
 Query: 162 XXXXTLILSSGFRLVKKKLYS 183  
 T+ +S F L KKKLYS  
 Sbjct: 276 LTRNTINISPDFTLTKKKLYS 297

FIG. 5C

Query: 24 HPESLLSDFDYWDYVVPPEPNLNEVIF---EESTCQNLVKML---ENCLSKSKQTKLGCS 76  
 +P+ LSD+ W+Y VPE N++F + L+KM N K L +  
 Sbjct: 613 NPDELSDVMWYENVPE---NTIVFSLHVNTLSRYKLLMKSKNHNASEKQPDALLKTA 669  
 Query: 77 KVLVPEKLTQRIAQDVLRSLSTPCGLRGCMVHMVNLEIENVCKKLDRIV 125  
 ++++ TO I DV +S+ PCGL + +N+ I+ + K++ I+  
 Sbjct: 670 EIILVTD-TQTI VFDV--ISTVHPCGLNIIKKFYQYLAINIPIDVLPNKIEWII 720

kb      9.5-  
7.5-  
4.4-  
2.4-  
1.4-

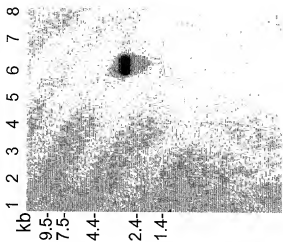
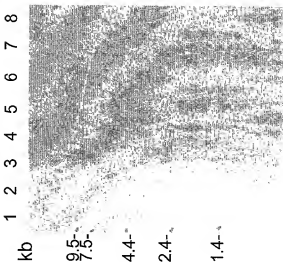
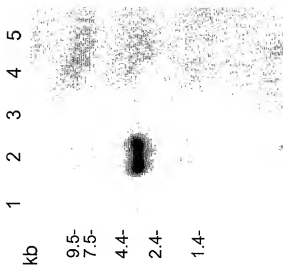






FIG. 8

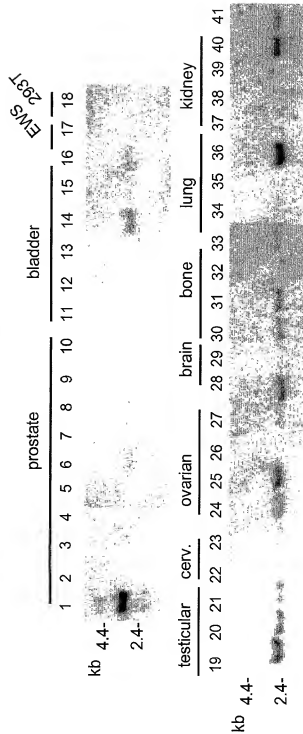
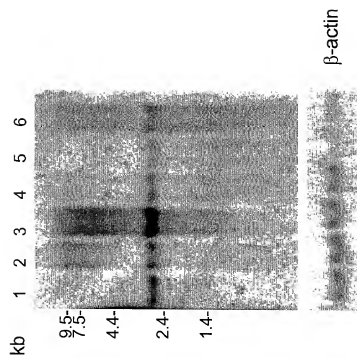


FIG. 9



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**FIG. 10**

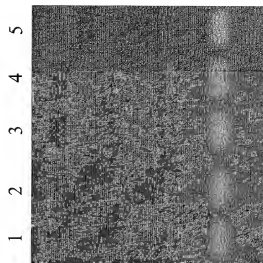


FIG. 11

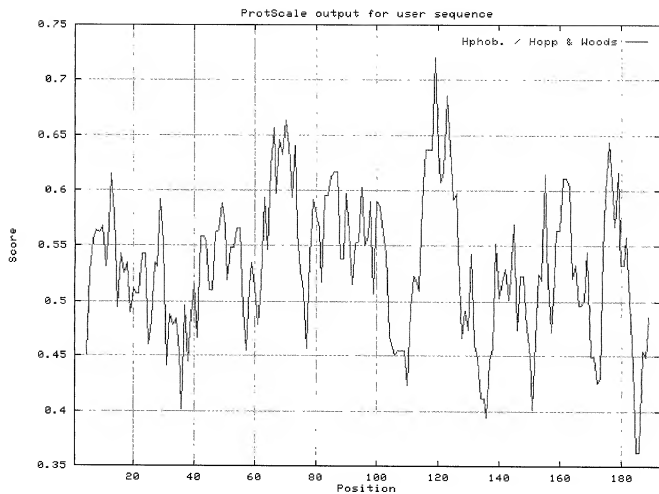


FIG. 12

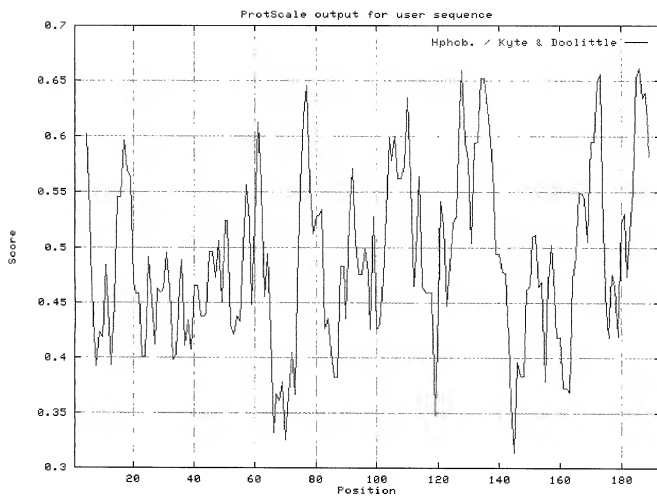


FIG. 13

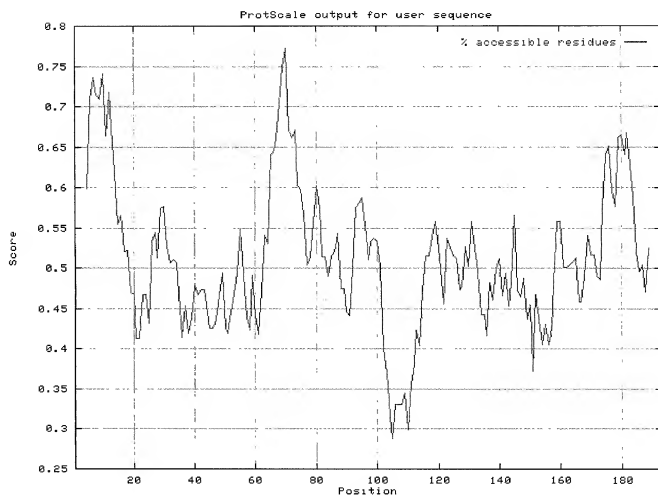


FIG. 14

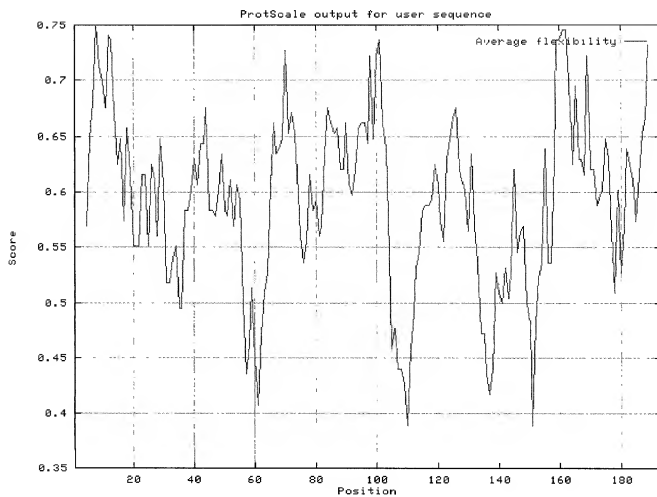




FIG. 15

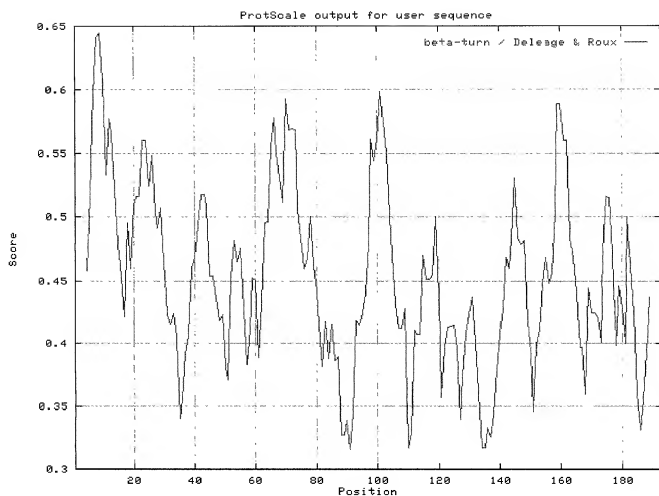


Fig. 16

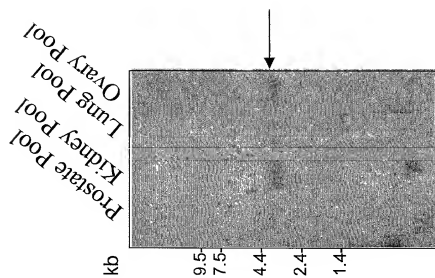


Fig. 17

